

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte DANIEL A. JAPUNTICH,  
VAUGHN B. GRANNIS, HAROLD J. SEPPALA  
and ANTHONY B. FERGUSON

Appeal No. 2004-0939  
Application No. 09/678,579

HEARD: April 27, 2004

Before COHEN, FRANKFORT, and MCQUADE, Administrative Patent Judges.

MCQUADE, Administrative Patent Judge.

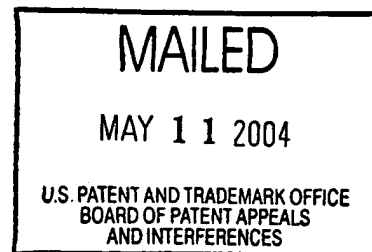
DECISION ON APPEAL

Daniel A. Japuntich et al. appeal from the final rejection (Paper No. 12) of claims 33 through 71, all of the claims pending in the application.

THE INVENTION

The invention relates to a filtering face mask having an exhalation valve. Representative claim 33 reads as follows:

33. A filtering face mask that comprises:
- (a) a mask body that is adapted to fit over the nose and mouth of a wearer; and
  - (b) an exhalation valve that is attached to the mask body, the exhalation valve comprising:



(1) a valve that comprises:  
    (i) a seal surface; and  
    (ii) an orifice that is circumscribed by the seal surface;

(2) a single flexible flap that has a fixed portion and only one free portion and first and second opposing ends, the first end of the single flexible flap being associated with the fixed portion of the flap so as to remain at rest during an exhalation, and the second end being associated with the free portion of the flexible flap so as to be lifted away from the seal surface during an exhalation, the second end also being located below the first end when the filtering face mask is worn on a person, the flexible flap being positioned on the valve seat such that the flap is pressed towards the seal surface in an abutting relationship therewith, under any orientation of the valve, when no external forces from the movement of fluid are exerted upon the flap, the flexible flap being secured to the valve seat at the fixed portion of the flap at two securement points, the two securement points being disposed outside a region encompassed by the valve seat orifice.

#### THE EVIDENCE

The examiner relies on the following items as evidence of obviousness:<sup>1</sup>

Warbasse	812,706	Feb. 13, 1906
Shindel	1,701,277	Feb. 05, 1929
McKim	3,191,618	Jun. 29, 1965

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<sup>1</sup> On pages 11 and 14 in the answer (Paper No. 20), the examiner mentions U.S. Patent No. 2,999,498 to Matheson, seemingly for the purpose of supporting the rejections on appeal. Matheson, however, is not included in the statement of any rejection. Where a reference is relied on to support a rejection, whether or not in a minor capacity, there is no excuse for not positively including the reference in the statement of the rejection. See In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970). Accordingly, we have not considered the teachings of Matheson in reviewing the merits of the examiner's rejections.

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Braun	4,934,362	Jun. 19, 1990
Simpson et al., British Patent Document (Simpson)	2,072,516	Oct. 07, 1981

The appellants advance the following items as evidence of non-obviousness:

The 37 CFR § 1.132 Affidavit of David M. Castiglione dated November 15, 1999 and filed October 15, 2001 (part of Paper No. 7) (Castiglione I)

The 37 CFR § 1.132 Affidavit of David M. Castiglione dated February 2, 2001 and filed October 15, 2001 (part of Paper No. 7) (Castiglione II)

The 37 CFR § 1.132 Affidavit of Brian S. McGinley dated June 28, 2001 and filed July 29, 2003 (part of Paper No. 19)

The 37 CFR § 1.132 Declaration of John L. Bowers dated December 10, 2001 and filed April 2, 2002 (part of Paper No. 9)

The 37 CFR § 1.132 Affidavit of Frank J. Fabin dated December 10, 2001 and filed April 2, 2002 (part of Paper No. 9)

The 37 CFR § 1.132 Declaration of Robert Betts dated December 7, 2001 and filed April 2, 2002 (part of Paper No. 9)

#### THE REJECTIONS

Claims 33 through 56 and 63 through 69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Simpson in view of McKim.

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Claim 57 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Simpson in view of McKim and Shindel.

Claims 58 through 62, 70 and 71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Simpson in view of McKim, Warbasse and Braun.

Attention is directed to the main and reply briefs (Paper Nos. 19 and 21) and to the first Office action and the answer (Paper Nos. 5 and 20) for the respective positions of the appellants and the examiner regarding the merits of these rejections.<sup>2</sup>

#### DISCUSSION

Simpson, the examiner's primary reference, discloses a respiratory face mask comprising a pouch 1-5 composed of at least one sheet of filtration-effective material and at least one sheet of backing material, a strap 10 for securing the pouch over the nose and mouth of a user, and an exhalation valve 12 positioned on the pouch adjacent the user's nose and/or mouth to prevent the build-up of water vapor in the filtration-effective

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<sup>2</sup> In the final rejection (Paper No. 12), claims 33 through 71 also stood provisionally rejected on the grounds of obviousness-type double patenting. As this rejection has not been restated in the answer, we assume that it has been withdrawn by the examiner in view of a terminal disclaimer (Paper No. 16) filed by the appellants subsequent to final rejection.

material during exhalation. In one embodiment, the exhalation valve takes the form of a flap valve:

[t]he flap valve 13 of Fig. 2 comprises a flexible circular flap member 15 of, for example, plastics material, which is arranged to cover and [close] valve openings 16 during inhalation and to flex away from those openings during exhalation. To allow flexing of the flap member 15 a part of its peripheral portion, a segment of the flap member, is fixed in position, the remaining part of the flap member being left free. The valve is fitted in an aperture in the mask and is held in place by a retaining ring 17 which engages the edge portion of that opening to provide an effective seal [page 2, lines 37 through 50].

The examiner has not clearly articulated any findings as to the differences between the subject matter recited in independent claims 33 and 63 and that disclosed by Simpson.<sup>3</sup> Certain remarks in the answer (see pages 4, 8, 10, 12 and 13) indicate, however, that the examiner (with good reason) views Simpson as lacking response to the limitations in these claims requiring the flexible flap to be positioned on the valve seat such that the flap is pressed towards the seal surface in an abutting relationship therewith, under any orientation of the valve, when no external forces from the movement of fluid are exerted upon

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<sup>3</sup> The examiner's reliance on the first Office action in this regard (see page 3 in the answer) is unavailing since the particular subject matter now recited in claims 33 and 63 was not being claimed at that time.

the flap. To cure these shortcomings in Simpson, the examiner turns to McKim.

McKim discloses a reed valve with a curved seat for use in a two cycle "kart" engine to control the passage of the fuel-air mixture from the carburetor into the crankcase. Observing that such valves have a tendency to float or flutter when closing during high speed operation of the engine (see column 1, lines 13 through 24), McKim teaches:

a valve A comprises a valve block 10 mounted over the intake port 11 of a generally conventional, air cooled, two-cycle engine block B. The latter consists of unitary engine cylinder portion 12 and crankcase portion 13. A valve reed 14, of spring sheet material, such as, for example shim stock, secured by an anchor bar 15 and screws 17 to a curved seat 18 formed on the inner or engine side of the valve block 10.

The curvature of this seat 18 conforms to the normally flexed condition of the valve reed 14 when the latter is flexed laterally from its normally straight position as shown in FIG. 3. The valve reed thus bears throughout its length against the valve seat, with the seating bias at the free end of the reed as great as, or greater than, that throughout the remainder of the reed. Thus, the reed tends to seat quickly, effectively, and without float or bounce after each opening thereof. This provides greatly increased efficiency, particularly at high speeds, over a reed valve seated on a conventional flat seat [column 1, line 55, through column 2, line 2].

With regard to the proposed combination of Simpson and McKim advanced in support of the rejection of claims 33 and 63, the examiner takes the view that "McKim clearly addresses the problem

of effectiveness of valve seating by non-aligning the flap retaining surface and the seal surface relative to each other thereby providing effective seating without float or bounce after each opening" (answer page 10 and page 12), and that "the reason for [the] combination of Simpson et al. with McKim is because it would have provided for quick effective seating without float or bounce after each opening as taught by McKim" (answer, page 10 and page 13).

As indicated above, McKim teaches that the floating/fluttering problem targeted by the reed valve disclosed therein arises during high speed operation of a two cycle engine. The appellants' uncontroverted affidavit/declaration evidence (particularly Castiglione I, Bowers, Betts and Fabin) establishes that this problem does not occur in respiratory mask exhalation valves of the sort disclosed by Simpson. The appellants' evidence further establishes that the McKim reed valve is not suitable for use in a respiratory mask exhalation valve. Hence, even if McKim is assumed to be analogous art with respect to the subject matter claimed (the appellants argue and present evidence that it is not), the evidentiary showing proffered by the appellants belies any notion that it would have been obvious within the meaning of § 103(a) to combine Simpson and McKim so as

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to arrive at the subject matter recited in claims 33 and 63 for any reason, let alone the one advanced by the examiner. The examiner's additional citations of Shindel against dependent claim 57, and Warbasse and Braun against dependent claims 58 through 62, 70 and 71, do not overcome this deficiency in the basic Simpson and McKim combination. Thus, considered in its entirety, the evidence before us does not justify the examiner's conclusion that the differences between subject matter recited in independent claims 33 and 63, and dependent claims 34 through 62 and 64 through 71, and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 33 through 56 and 63 through 69 as being unpatentable over Simpson in view of McKim, the standing 35 U.S.C. § 103(a) rejection of claim 57 as being unpatentable over Simpson in view of McKim and Shindel, or the standing 35 U.S.C. § 103(a) rejection of claims 58 through 62, 70 and 71 as being unpatentable over Simpson in view of McKim, Warbasse and Braun.

#### SUMMARY

The decision of the examiner to reject claims 33 through 71 is reversed.




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REVERSED

IRWIN CHARLES COHEN  
Administrative Patent Judge

Charles E. Frankfort  
CHARLES E. FRANKFORT  
Administrative Patent Judge

  
JOHN P. MCQUADE  
Administrative Patent Judge

BOARD OF PATENT

APPEALS AND

## INTERFERENCES

JPM/kis

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3M INNOVATIVE PROPERTIES COMPANY  
P. O . BOX 33427  
ST. PAUL, MN 55133-3427